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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,316	06/23/2006	Toshihiro Oki	292920US0PCT	9808

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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CHEUNG, WILLIAM K

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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01/28/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/584,316	<b>Applicant(s)</b> OKI ET AL.	
	<b>Examiner</b> WILLIAM K. CHEUNG	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Request for Continued Examination***

1. The request filed on December 22, 2009 for a Request for Continued Examination (RCE) under 37 CFR 1.53(d) based on parent Application No. 10/584,316 is acceptable and a RCE has been established. An action on the RCE follows. Claims 1-15 are pending.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

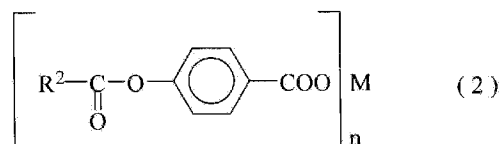
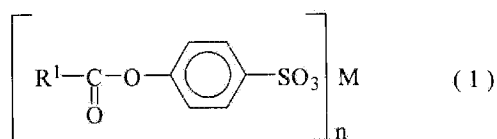
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Baeck et al. (EP 0 297 673) for the reasons adequately set forth from paragraph 4 of the office action of August 20, 2009, as affirmed by Jayawant (US 3,860,694).

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Claim 1. (currently amended) A softening detergent composition comprising:

- (a) 1 to 30% by mass of a clay mineral;
- (b) 0.5 to 20% by mass of a ~~compound capable of releasing hydrogen peroxide in water~~ sodium carbonate-hydrogen peroxide adduct;
- (c) 0.1 to 20% by mass of a compound represented by the following general formula (1) or (2):



wherein  $\text{R}^1$  is an alkyl group having 4 to 13 carbon atoms;  $\text{R}^2$  is an alkyl group having 5 to 13 carbon atoms; M is a hydrogen atom, or an alkali metal atom, an alkaline earth metal atom, an ammonium or an alkanolamine, with proviso that when M is an alkaline earth metal atom, n is 2, and that when M is an alkali metal atom, an ammonium or an alkanolamine, n is 1,

or a combination of both; and

wherein a mass ratio of the component (b) to the component (c) [component (b)/component (c)] is from 3/4 to 20/1.

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(d) 0.4 to 20 wt. % of a salt of a fatty acid; and

10 to 60% by mass of a component corresponding to a surfactant as prescribed in

JIS K 3362:1998,

wherein a mass ratio of the component (b) to the component (c) [component

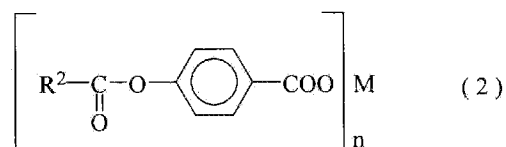
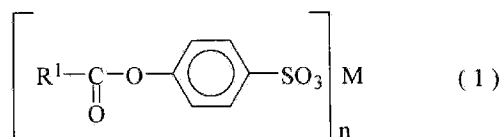
(b)/component (c)] is from 3/4 to 20/1.

6, (currently amended) A method of enhancing softening effect of a clay mineral against a fibrous manufactured article, comprising the step of applying to the fibrous manufactured article,

(a) a clay mineral;

(b) a sodium carbonate-hydrogen peroxide adduct ~~a compound capable of releasing hydrogen peroxide in water;~~ and

(c) a compound represented by the following general formula (1) or (2):



wherein R<sup>1</sup> is an alkyl group having 4 to 13 carbon atoms; R<sup>2</sup> is an alkyl group having 5 to 13 carbon atoms; M is a hydrogen atom, or an alkali metal atom, an alkaline earth

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metal atom, an ammonium or an alkanolamine, with proviso that when M is an alkaline earth metal atom, n is 2, and that when M is an alkali metal atom, an ammonium or an alkanolamine, n is 1, or a combination of both; and  
(d) a salt of a fatty acid,  
in mass ratios satisfying:  
the component (b)/the component (c) = 3/4 to 20/1, and  
the component (a)/the component (c) = 35/1 to 1/5.

Baeck et al. (page 7-8, Table, Composition II) disclose a composition that meets all the features of claims 1-8. Regarding claims 6-8, Baeck et al. (abstract) clearly teach using the disclosed composition as a fabric softening materials. Applicants must recognize that fabrics are inherently fibrous materials. Regarding the "coated granule" feature of claim 13, applicants must recognize that Baeck et al. (page 8, Table) clearly disclose the use of sodium sulfate and Hectorite clay in the amount as required by the claims. Since Baeck et al. have taught the composition as claimed, the examiner has a reasonable basis to believe that the claim 13 has been met by Baeck et al. Applicants must recognize that the claimed invention relates to "a composition", where the coating itself carries very little weight in the patentability of the claimed invention.

Regarding the claimed "water" and the amounts, Baeck et al. (page 10, Table) clearly disclose composition having the amount of water as claimed.

Regarding the claimed "sodium carbonate-hydrogen peroxide adduct", Baeck et al. (page 4, line 39-41) disclose it is suitable to include alkali-metal percarbonate into the disclosed composition. Further, Baeck et al. (page 4, line 42) clearly indicate that

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sodium is the alkali-metal. Since sodium percarbonate is basically same as (or considered as) an adduct of sodium carbonate-hydrogen peroxide which is affirmed by Jayawant, the examiner has a reasonable basis to believe that the claimed "sodium carbonate-hydrogen peroxide adduct" has been met by Baeck et al. Claims 1-15 are anticipated.

Applicant's arguments filed December 22, 2009 have been fully considered but they are not persuasive. Applicants argue that Baeck et al. are silent on the "sodium carbonate-hydrogen peroxide adduct" being claimed. However, Baeck et al. (page 4, line 42) clearly indicate that sodium is the alkali-metal. Since sodium percarbonate is basically same as (or considered as) an adduct of sodium carbonate-hydrogen peroxide which is affirmed by Jayawant (col. 3, line 25-51), the examiner has a reasonable basis to believe that the claimed "sodium carbonate-hydrogen peroxide adduct" has been met by Baeck et al.

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The reaction between sodium carbonate and hydrogen peroxide forms a perhydrate, that is, a compound with hydrogen peroxide of crystallization. This sodium carbonate perhydrate theoretically contains 1.5 moles of hydrogen peroxide for every mole of sodium carbonate.  $H_2O_2$  can be added to sodium carbonate in any proportion but the maximum amount of hydrogen peroxide in a stable solid product will not exceed the stoichiometric proportion. Although not commercially desirable, it is possible to make sodium carbonate perhydrates containing less  $H_2O_2$ . For example, if a reaction between less than 1.5 moles of hydrogen peroxide is carried out by the process of this invention, then solid adducts of hydrogen peroxide and sodium carbonate containing from about 1 percent to about 30 percent hydrogen peroxide can be formed. The theoretical amount of active oxygen present in a compound corresponding to the formula  $Na_2CO_3 \cdot 1.5H_2O_2$  is 15.28 percent, which corresponds to 32.47 percent  $H_2O_2$  of crystallization. In the dry route of this invention, any desired amount up to the theoretical maximum of active oxygen can be incorporated in the final product. In addition, sodium bicarbonate,  $NaHCO_3$ , reacts with hydrogen peroxide to form sodium percarbonate. This means that any sodium bicarbonate present would be detrimental to the reaction efficiency.

Applicants argue that Baeck et al. teach a fatty acid, but fail to teach a composition comprising a fatty acid salt, applicants fail to recognize that the surfactants disclosed in composition II of the table of page 7-8 of Baeck et al. are the preferred embodiment. However, according to Baeck et al. (page 3, line 38-39), Baeck et al. clearly teach that common sodium and potassium coconut or tallow soap (sodium or potassium tallowate, a fatty acid salt) can also be used. In view of such teachings and in view that applicants' inventions are primarily based on the composition itself, the examiner has a reasonable basis to believe that the claimed fatty acid with sodium-hydrogen peroxide combination is anticipated. Regarding the argued unexpected results filed in the Affidavits of April 27, 2009, applicants must recognize that unexpected



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results can not overcome an anticipation rejection, where the claimed adduct of sodium carbonate-hydrogen peroxide has been taught in Baech et al.

4. Claims 1, 2, 5, 6, 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Baker et al. (US 2002/0128165) for the reasons adequately set forth from paragraph 5 of the office action of August 20, 2009, as affirmed by Jayawant (US 3,860,694).

Baker et al. (page 11-13, Composition I) disclose a composition that meets all the features of claims 1, 2, 5, 6, 7. Regarding the method of claims 6, 7, Baker et al. (page 1, 0014) clearly teach using the disclosed composition for use in automatic laundry or for washing fabrics which are inherently fibrous materials. Claims 1, 2, 5, 6, 7 are anticipated.

Regarding the claimed "sodium carbonate-hydrogen peroxide adduct", Baker et al. (page 3, 0051) disclose it is suitable to include alkali-metal percarbonate into the disclosed composition. Further, Baker et al. (page 3, 0051) clearly indicate that sodium is the alkali-metal. Since sodium percarbonate is basically same as (or considered as) an adduct of sodium carbonate-hydrogen peroxide which is affirmed by Jayawant (col. 3, line 25-51), the examiner has a reasonable basis to believe that the claimed "sodium carbonate-hydrogen peroxide adduct" has been met by Baker et al. Claims 1, 2, 5, 6, 7 are anticipated.

Applicant's arguments filed December 22, 2009 have been fully considered but they are not persuasive. Applicants argue that Baker et al. are silent on the "sodium carbonate-hydrogen peroxide adduct" being claimed. However, Baker et al. (page 3,

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0051) clearly indicate that sodium is the alkali-metal. Since sodium percarbonate is basically same as (or considered as) an adduct of sodium carbonate-hydrogen peroxide which is affirmed by Jayawant (col. 3, line 25-51), the examiner has a reasonable basis to believe that the claimed "sodium carbonate-hydrogen peroxide adduct" has been met by Baker et al.

The reaction between sodium carbonate and hydro- 25  
gen peroxide forms a perhydrate, that is, a compound  
with hydrogen peroxide of crystallization. This sodium  
carbonate perhydrate theoretically contains 1.5 moles  
of hydrogen peroxide for every mole of sodium carbon- 30  
ate.  $\text{H}_2\text{O}_2$  can be added to sodium carbonate in any pro-  
portion but the maximum amount of hydrogen perox-  
ide in a stable solid product will not exceed the stoi-  
chiometric proportion. Although not commercially de-  
sirable, it is possible to make sodium carbonate perhy- 35  
drates containing less  $\text{H}_2\text{O}_2$ . For example, if a reaction  
between less than 1.5 moles of hydrogen peroxide is  
carried out by the process of this invention, then solid  
adducts of hydrogen peroxide and sodium carbonate  
containing from about 1 percent to about 30 percent 40  
hydrogen peroxide can be formed. The theoretical  
amount of active oxygen present in a compound corre-  
sponding to the formula  $\text{Na}_2\text{CO}_3 \cdot 1.5\text{H}_2\text{O}_2$  is 15.28 per-  
cent, which corresponds to 32.47 percent  $\text{H}_2\text{O}_2$  of crys-  
tallization. In the dry route of this invention, any de- 45  
sired amount up to the theoretical maximum of active  
oxygen can be incorporated in the final product. In ad-  
dition, sodium bicarbonate,  $\text{NaHCO}_3$ , reacts with hy-  
drogen peroxide to form sodium percarbonate. This  
means that any sodium bicarbonate present would be 50  
detrimental to the reaction efficiency.

Regarding applicants' argument that Baker et al. fail to teach the claimed fatty acid salt, applicants fail to recognize that Baker et al. (page 12, Table 1, composition H) clearly teach 0.3 of soap, where Baker et al. (page 10, 00176, table of abbreviations) clearly indicate that soap is sodium salt of tallow and coconut fatty acid.

Regarding the argued unexpected results filed in the Affidavits of April 27, 2009, applicants must recognize that unexpected results can not overcome an anticipation rejection, where the claimed adduct of sodium carbonate-hydrogen peroxide has been taught in Baker et al.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM K. CHEUNG whose telephone number is (571)272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/William K Cheung/  
Primary Examiner, Art Unit 1796

William K. Cheung, Ph. D.  
Primary Examiner  
January 19, 2010